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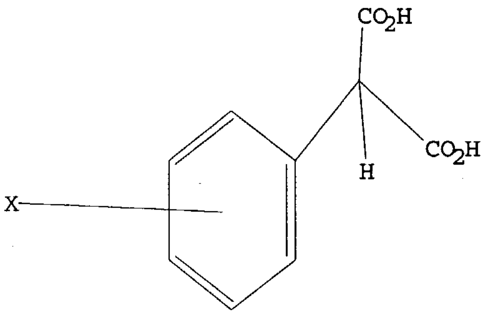

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L11  ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        1998:240023  CAPLUS
DOCUMENT NUMBER:         128:217445
TITLE:                   Enzymic Transformation and Liquid-Chromatographic
                         Separation as Methods for the Preparation of the (R)-
                         and (S)-Enantiomers of the Centrochiral
                         Hydridogermanes p-XC6H4(H)Ge(CH2OAc)CH2OH (X = H, F)
AUTHOR(S):               Tacke, Reinhold; Kosub, Ulrike; Wagner, Stephan A.;
                         Bertermann, Ruediger; Schwarz, Sigrid; Merget, Stefan;
                         Guenther, Kurt
CORPORATE SOURCE:        Institut fuer Anorganische Chemie, Universitaet
                         Wuerzburg, Wuerzburg, D-97074, Germany
SOURCE:                  Organometallics (1998), 17(9), 1687-1699
                         CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER:               American Chemical Society
DOCUMENT TYPE:           Journal
LANGUAGE:                English
OTHER SOURCE(S):         CASREACT 128:217445
AB   The arylbis(hydroxymethyl)germanes Ph(H)Ge(CH2OH)2 (5) and
     p-FC6H4(H)Ge(CH2OH)2 (6) as well as the bis(acetoxymethyl)arylgermanes
     Ph(H)Ge(CH2OAc)2 (9) and p-FC6H4(H)Ge(CH2OAc)2 (10) were synthesized,
     starting from dichlorobis(chloromethyl)germane [Cl2Ge(CH2Cl)2 →
     Aryl(Cl)Ge(CH2Cl)2 → Aryl(AcO)Ge(CH2OAc)2 →
     Aryl(H)Ge(CH2OH)2 → Aryl(H)Ge(CH2OAc)2; Aryl = Ph, p-FC6H4].
     Reaction of the diols 5 and 6 with Ac2O and NEt3 (molar ratio 1:1:1)
     yielded the (acetoxymethyl)aryl(hydroxymethyl)germanes
     rac-Ph(H)Ge(CH2OH)CH2OAc (rac-1) and rac-p-FC6H4(H)Ge(CH2OH)CH2OAc
     (rac-2), resp.  The (R)- and (S)-enantiomers of 1 and 2 were prepared on a
     preparative scale by enzymic conversions.  (R)-1 and (R)-2 were obtained
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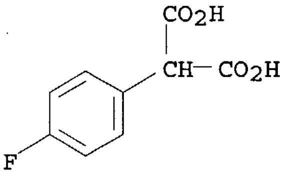
by enantioselective transesterifications of the prochiral diols 5 and 6, resp., with EtOAc (acyl donor) using porcine pancreas lipase (PPL, E.C.3.1.1.3) as the biocatalyst (reaction medium, EtOAc). The corresponding antipodes (S)-1 and (S)-2 were prepared by PPL-catalyzed enantioselective hydrolyzes of the prochiral diacetates 9 and 10, resp. [reaction medium, Sorensen phosphate buffer (pH 7)/THF (25:1, volume/volume)]. The yields and enantiomeric purities of the optically active germanes were as follows: (R)-1, 76%, 93% ee; (S)-1, 48%, 84% ee; (R)-2, 77%, 86/87% ee; (S)-2, 62%, 94% ee. Alternatively, (R)-2 and (S)-2 were obtained by preparative liquid-chromatog. resolution of rac-2 using cellulose tribenzoate as the chiral stationary phase (yield 80%; enantiomeric purities 97% ee). For reasons of comparison, the (R)- and (S)-enantiomers of Ph(H)C(CH2OH)CH2OAc (3) and p-FC6H4(H)C(CH2OH)CH2OAc (4) (C analogs of the germanes 1 and 2) were prepared using the same preparative methods [PPL-catalyzed transesterifications of Ph(H)C(CH2OH)2 (7) and p-FC6H4(H)C(CH2OH)2 (8) with vinyl acetate and EtOAc, resp. (→(R)-3, (R)-4); PPL-catalyzed hydrolyzes of Ph(H)C(CH2OAc)2 (11) and p-FC6H4(H)C(CH2OAc)2 (12) (→(S)-3, (S)-4); chromatog. resolution of rac-p-FC6H4(H)C(CH2OH)CH2OAc (rac-4) (→(R)-4, (S)-4)]. The preparative results were similar to those obtained for the Ge compds. In contrast to the configurationally stable antipodes of the C compds. 3 and 4, the (R)- and (S)-enantiomers of the corresponding Ge analogs 1 and 2 undergo a slow racemization upon heating (neat compds.). The chiroptical properties of the Ge/C analogs (R)-1/(R)-3, (S)-1/(S)-3, (R)-2/(R)-4, and (S)-2/(S)-4 (dissolved in acetone) differ significantly from one another (opposite signs of optical rotation at various wavelengths). In contrast, the resp. optically active Ge/C analogs (R)- and (S)-Ph(H)El(CH2OAc)CH2OSiPh2tBu [(R)- and (S)-21, El = Ge; (R)- and (S)-23, El = C], (R)- and (S)-p-FC6H4(H)El(CH2OAc)CH2OSiPh2tBu [(R)- and (S)-22, El = Ge; (R)- and (S)-24, El = C], Ph(H)El(CH2OH)CH2OSiPh2tBu [(R)- and (S)-25, El = Ge; (R)- and (S)-27, El = C], and (R)- and (S)-p-FC6H4(H)El(CH2OH)CH2OSiPh2tBu [(R)- and (S)-26, El = Ge; (R)- and (S)-28, El = C] display similar chiroptical properties when having the same absolute configuration. The antipodes of 21-24 were prepared by silylation of the corresponding (R)- and (S)-enantiomers of 1-4 with Ph2tBuSiCl; the antipodes of 25-28 were obtained by transesterification of the (R)- and (S)-enantiomers of 21-24 with MeOH (all reactions with retention of absolute configuration).

IT **144616-13-7**, 4-Fluorophenylmalonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(conversion to arylpropanediol)
RN 144616-13-7 CAPLUS
CN Propanedioic acid, (4-fluorophenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1998:112341 CAPLUS
DOCUMENT NUMBER:	128:180328
TITLE:	Preparation of phenyl-substituted heterocyclic ketoenols as pesticides.
INVENTOR(S):	Lieb, Folker; Fischer, Reiner; Bretschneider, Thomas; Ruther, Michael; Graff, Alan; Schneider, Udo; et al.
PATENT ASSIGNEE(S):	Bayer A.-G., Germany; Lieb, Folker; Fischer, Reiner; Bretschneider, Thomas; Ruther, Michael; Graff, Alan
SOURCE:	PCT Int. Appl., 161 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	German

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FAMILY ACC. NUM. COUNT:  1
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     US 6359151           B2    20020319
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     US 6596873           B1    20030722     US 2002-264424         20021004
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                                             WO 1997-EP3973      W  19970723
                                             US 1999-230653      A3 19990128
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OTHER SOURCE(S):          MARPAT 128:180328
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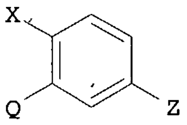

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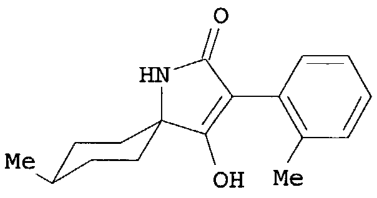

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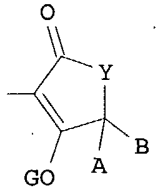

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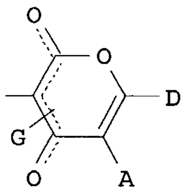
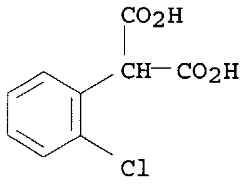


AB Title compds. [I; X = halo, alkyl, alkenyl, alkynyl, alkoxy, benzyloxy, haloalkyl, haloalkoxy, cyano, NO2; Z = H, amino, halo, alkyl, alkoxy, haloalkyl, haloalkoxy, OH, cyano, NO2, (substituted) PhO, PhS, heteroaryloxy, heteroarylthio, phenylalkoxy, phenylalkylthio; Q = Q1, Q2; Y = NH, O, S; A = (substituted) alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aryl, aralkyl, heteroaryl; B = alkyl, alkoxyalkyl; AB, AD = atoms to form (unsatd.) (substituted) carbocyclic or heterocyclic rings; D = H, (substituted) alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aralkyl, aryl, heteroarylalkyl, heteroaryl; G = H, acyl], were prepared Thus, title compound (II) (preparation given) at 0.15 gave 100% kill of Phaedon cochleariae larvae on cabbage leaves.

IT **144616-14-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of phenyl-substituted heterocyclic ketoenols as pesticides)
RN 144616-14-8 CAPLUS
CN Propanedioic acid, (2-chlorophenyl)- (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1997:151521 CAPLUS
DOCUMENT NUMBER:	126:157396
TITLE:	Preparation of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides and herbicides
INVENTOR(S):	Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Dollinger, Markus; Santel, Hans-Joachim; Graff, Alan; Andersch, Wolfram
PATENT ASSIGNEE(S):	Bayer A.-G., Germany
SOURCE:	Ger. Offen., 135 pp. CODEN: GWXXBX
DOCUMENT TYPE:	Patent
LANGUAGE:	German
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

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    US 6469196             B2     20021022
    CN 1362397             A      20020807     CN 2001-138493           20011114
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    US 6759548             B2     20040706
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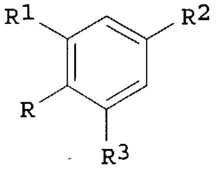
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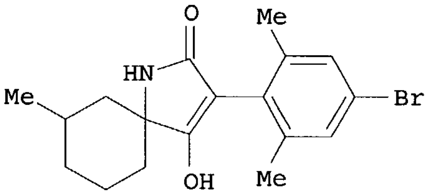
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AB    Title compds. [I; R = 4-(O-acyl)hydroxy-2-oxo-3-pyrrolin-2-yl,
      -2,5-dihydro-3-furyl, -2,5-dihydro-3-thienyl, etc.; R1 = alkyl; R2,R3 =
      halo or alkyl] were prepared  Thus, 4,2,6-BrMe2C6H2CH2CO2H was amidated by
      Me 1-amino-3-methylcyclohexanecarboxylate and the product cyclized to give
      title compound II.  Data for biol. activity of I were given.
IT    186748-64-1P 186748-67-4P 186748-70-9P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides and
         herbicides)
RN    186748-64-1  CAPLUS
CN    Propanedioic acid, (2-chloro-4,6-dimethylphenyl)- (9CI)  (CA INDEX NAME)
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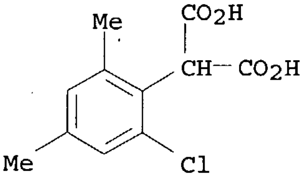

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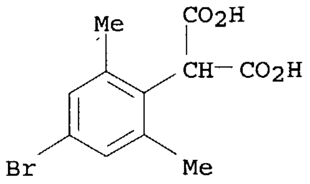

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RN   186748-70-9  CAPLUS
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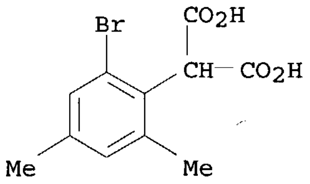

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L11  ANSWER 4 OF 14  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        1997:41800  CAPLUS
DOCUMENT NUMBER:         126:74741
TITLE:                   Alkyl dihalogenated phenyl-substituted keto enols
                         useful as pesticides and herbicides
INVENTOR(S):             Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther,
                         Michael; Fischer, Reiner; Bretschneider, Thomas;
                         Erdelen, Christoph; Wachendorff-Neumann, Ulrike;
                         Dahmen, Peter; Dollinger, Markus; Santel,
                         Hans-Joachim; et al.
PATENT ASSIGNEE(S):      Bayer A.-G., Germany; Lieb, Folker; Hagemann, Hermann;
                         Widdig, Arno; Ruther, Michael; Fischer, Reiner;
                         Bretschneider, Thomas; Erdelen, Christoph;
                         Wachendorff-Neumann, Ulrike; et al.
SOURCE:                  PCT Int. Appl., 231 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
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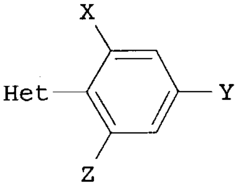
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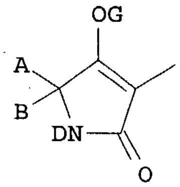

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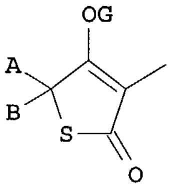

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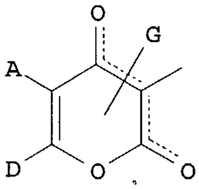

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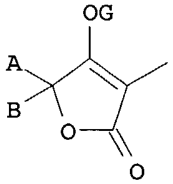

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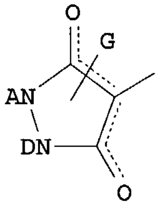

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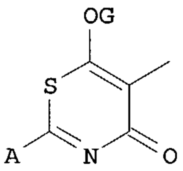
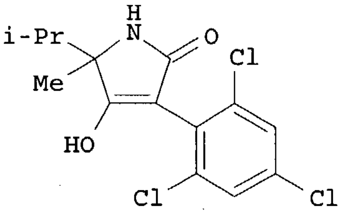


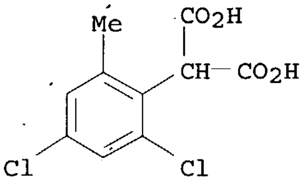

II

AB Title compds. I [X = halo, Y, Z = halo or alkyl, provided that 1 of Y and Z always = halo, and the other = alkyl; Het = 1 of the heterocyclic groups Q1-Q6; A = H, (halo)alkyl, alkenyl, alkoxyalkyl, (un)substituted cycloalkyl or heterocyclyl, etc.; B = H, alkyl, alkoxyalkyl; D = H, (un)substituted alk(en/yn)yl, alkoxyalkyl, cycloalkyl, aralkyl, heterocyclyl, aryl, etc.; A and B, or A and D, may form (un)substituted carbo- or heterocyclic rings; G = various acyl, sulfonyl, or phosphoryl substituents, or metal or ammonium ions] are prepared Also disclosed are several processes for preparing the compds., and their use as pesticides and herbicides. For example, amidation of 2,4-dichloro-6-methylphenylacetic acid with H2NC(Me)(i-Pr)CN via the acid chloride using SOCl2 (81%), followed by alcoholysis of the nitrile using H2SO4 and MeOH quench (73%), and cyclization of the resultant ester with KOBu-tert in THF (73%), gave title compound II. In a test against Myzus persicae at 0.1%, II gave 100% kill in 6 days. At 250 g/ha preemergence, selected I gave 80-100% kill of 4 weeds with 0-50% damage to Beta vulgaris.

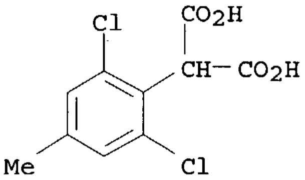
IT **185153-38-2P 185153-39-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of alkyldihalophenyl-substituted keto enols as pesticides and herbicides)

RN 185153-38-2 CAPLUS

CN Propanedioic acid, (2,4-dichloro-6-methylphenyl)- (9CI) (CA INDEX NAME)



RN 185153-39-3 CAPLUS
CN Propanedioic acid, (2,6-dichloro-4-methylphenyl)- (9CI) (CA INDEX NAME)



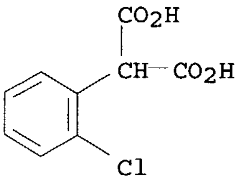
L11 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1997:1276 CAPLUS
DOCUMENT NUMBER:	126:103742
TITLE:	On the conformation of the substrate binding to the active site during the course of enzymic decarboxylation
AUTHOR(S):	Kawasaki, Takayasu; Horimai, Emiko; Ohta, Hiromichi
CORPORATE SOURCE:	Faculty of Science and Technology, Keio University, Yokohama, 223, Japan
SOURCE:	Bulletin of the Chemical Society of Japan (**1996**), 69(12), 3591-3594 CODEN: BCSJA8; ISSN: 0009-2673
PUBLISHER:	Nippon Kagakkai
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB The activation parameters of the enzymic decarboxylation of malonic acid derivs. catalyzed by arylmalonate decarboxylase (AMDase) were determined. In order to understand the conformation of the substrate at the transition state, the activation entropy (ΔS.dbldag.) for indane-1,1-dicarboxylic acid, a representative mol. that is conformationally restricted, was compared with those of phenylmalonic acid and ortho-chlorophenylmalonic acid, of which the aromatic ring can freely rotate. The obtained value for the former mol. was about 10 cal mol-1 K-1 smaller than those of the latter compds., clearly indicating that a conformationally restricted substrate, such as the indane derivative, is entropically advantageous for enzymic decarboxylation. These kinetic studies evidently disclose that the conformation of the substrate at the transition state in the course of AMDase-catalyzed decarboxylation should be synperiplanar with regard to ortho- and α-substituents.

IT **144616-14-8**, Propanedioic acid,(2-Chlorophenyl)-
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(activation parameters of the enzymic decarboxylation of malonic acid derivs. catalyzed by arylmalonate decarboxylase)

RN 144616-14-8 CAPLUS
CN Propanedioic acid, (2-chlorophenyl)- (9CI) (CA INDEX NAME)



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REFERENCE COUNT:            25     THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS
                                   RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11  ANSWER 6 OF 14  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:           1996:177853  CAPLUS
DOCUMENT NUMBER:            124:317003
TITLE:                      Preparation of quinolonecarboxylic acids as medical
                            bactericides
INVENTOR(S):                Todo, Yozo; Hayashi, Kazuya; Takamatsu, Tamotsu;
                            Uehara, Sayuri; Takahata, Masahiro; Watanabe, Yasuo;
                            Narita, Hirokazu
PATENT ASSIGNEE(S):         Toyama Chemical Co Ltd, Japan
SOURCE:                     Jpn. Kokai Tokkyo Koho, 18 pp.
                            CODEN: JKXXAF
DOCUMENT TYPE:              Patent
LANGUAGE:                   Japanese
FAMILY ACC. NUM. COUNT:     1
PATENT INFORMATION:

     PATENT NO.            KIND   DATE         APPLICATION NO.         DATE
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     JP 07309839            A2    19951128     JP 1994-128087          19940519 <--
     JP 3542165             B2    20040714
PRIORITY APPLN. INFO.:                         JP 1994-128087          19940519
OTHER SOURCE(S):            MARPAT 124:317003
GI
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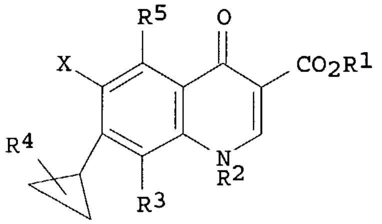

I

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AB    The title compds. I [R1 = H, CO2H-protecting group; R2 = (un)substituted
      alkyl, etc.; R3 = alkyl; R4 = H, alkyl, etc.; R5 = H, halo, etc.; X =
      halo] are claimed.  I [R1 = R4 = R5 = H; R2 = cyclopropyl; X = F; R3 =
      methyl] (NMR data given) in vitro showed MIC of ≤ 0.05 µg/mL
      against methicillin-resistant S. aureus F-597 and E. coli NIHJ.
IT    174637-88-8P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation of quinolonecarboxylic acids as medical bactericides)
RN    174637-88-8  CAPLUS
CN    1,2-Benzenedicarboxylic acid, 4-(dicarboxymethyl)-3,5,6-trifluoro-,
      1,2-diethyl ester (9CI)  (CA INDEX NAME)
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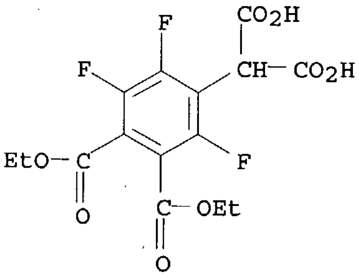

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L11  ANSWER 7 OF 14  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:           1995:227595  CAPLUS
DOCUMENT NUMBER:            122:25904
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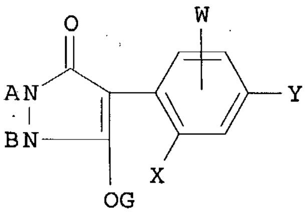
TITLE: Preparation of 3-hydroxy-4-aryl-5-oxopyrazoline derivatives as insecticides, acaricides and herbicides.
INVENTOR(S): Krueger, Bernd-Wieland; Fischer, Reiner; Bertram, Heinz-Juergen; Bretschneider, Thomas; Boehm, Stefan; Krebs, Andreas; Schenke, Thomas; Santel, Hans-Joachim; Lurssen, Klaus; et al.
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: U.S., 30 pp. Cont.-in-part of U.S. Ser. No. 849,863, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 5358924	A	19941025	US 1992-999058	19921231	<--
DE 4109208	A1	19920924	DE 1991-4109208	19910321	<--
US 5474974	A	19951212	US 1994-233911	19940428	<--
US 5661110	A	19970826	US 1995-476171	19950607	<--
US 5739389	A	19980414	US 1996-774469	19961230	<--
US 5780394	A	19980714	US 1997-788715	19970123	<--
US 6221810	B1	20010424	US 1998-52290	19980331	<--

PRIORITY APPLN. INFO.:
DE 1991-4109208 A 19910321
US 1992-849863 B2 19920312
US 1992-968888 A2 19921216
US 1992-999058 A3 19921231
US 1994-233911 A3 19940428
US 1995-476171 A3 19950607
US 1997-788715 A3 19970123

OTHER SOURCE(S): MARPAT 122:25904

GI



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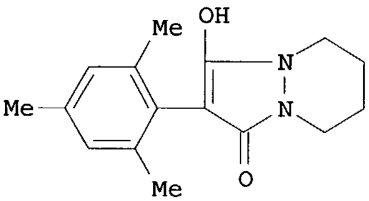


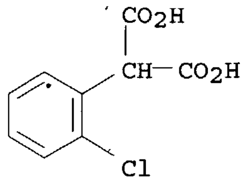
II

AB The 3-hydroxy-4-aryl-5-oxopyrazoline derivs. I [A,B= H, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkythioalkyl, cycloalkyl or (un)substituted aryl; AB= bivalent radical of an (un)saturated (un)substituted mono-, bi-, tri- or polycyclic system;X,Zn = W, where Z = alkyl, halo or alkoxy; Y=X,H,haloalkyl and n=0, 1-3; G=H,COR1, etc.;R1=(halo)alkyl,alkenyl, alkynyl,etc.] are prepared as insecticides, acaricides or herbicides. Mesityl chlorocarbonyl ketene was reacted with piperidazine in Et3N-containing ether, to give 3-hydroxy-4-mesityl-5-oxo-1,2-tetramethylenepyrazoline (II). II (1%) totally controlled Lucilia cuprina larvae.

IT **144616-14-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of hydroxy(aryl)oxopyrazoline derivs. as insecticides, acaricides and herbicides)

RN 144616-14-8 CAPLUS

CN Propanedioic acid, (2-chlorophenyl)- (9CI) (CA INDEX NAME)



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L11  ANSWER 8 OF 14  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1993:22227  CAPLUS
DOCUMENT NUMBER:          118:22227
TITLE:                    3-Hydroxy-4-aryl-5-oxopyrazoline derivatives, their
                          preparation, and their use as pesticides and
                          herbicides
INVENTOR(S):              Krueger, Bernd Wieland; Fischer, Reiner; Bertram,
                          Heinz Juergen; Bretschneider, Thomas; Boehm, Stefan;
                          Krebs, Andreas; Schenke, Thomas; Santel, Hans Joachim;
                          Luerssen, Klaus; et al.
PATENT ASSIGNEE(S):       Bayer A.-G., Germany
SOURCE:                   Ger. Offen., 45 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.          DATE
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     DE 4109208           A1   19920924      DE 1991-4109208          19910321 <--
     EP 508126            A1   19921014      EP 1992-104044           19920310 <--
     EP 508126            B1   19970502
         R:  BE, CH, DE, ES, FR, GB, GR, IT, LI, NL
     ES 2101764           T3   19970716      ES 1992-104044           19920310 <--
     JP 05117240          A2   19930514      JP 1992-91438            19920318 <--
     JP 3100223           B2   20001016
     BR 9200983           A    19921117      BR 1992-983              19920320 <--
     US 5332720           A    19940726      US 1992-968888           19921216 <--
     US 5358924           A    19941025      US 1992-999058           19921231 <--
     US 5474974           A    19951212      US 1994-233911           19940428 <--
     US 5661110           A    19970826      US 1995-476171           19950607 <--
     US 5739389           A    19980414      US 1996-774469           19961230 <--
     US 5780394           A    19980714      US 1997-788715           19970123 <--
     US 6221810           B1   20010424      US 1998-52290            19980331 <--
PRIORITY APPLN. INFO.:                       DE 1991-4109208      A  19910321
                                             US 1992-849863       B3 19920312
                                             US 1992-968888       A2 19921216
                                             US 1992-999058       A3 19921231
                                             US 1994-233911       A3 19940428
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OTHER SOURCE(S):          MARPAT 118:22227
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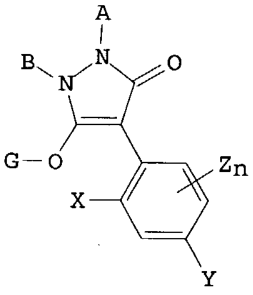


I

AB Title compds. I [A, B = H, alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, cycloalkyl, (un)substituted aryl; or AB = (un)saturated (un)substituted (bi- or higher cyclic) bivalent group; X = alkyl, halo, alkoxy; Y = H, alkyl, halo, alkoxy, haloalkyl; Z = alkyl, halo, alkoxy; n = 0-3; G = H, certain (un)substituted acyl, sulfonyl, phosphoryl, and (thio)carbamoyl groups] were prepared as pesticides (especially insecticides and acaricides), herbicides, etc. For example, reaction of mesityl(chlorocarbonyl)ketene (preparation given) with piperidazine in Et2O containing Et3N at 50°, and treatment of the product in THF with ice-HCl, gave 66% I [AB = (CH2)4, X = Y = Me, Zn = 6-Me, G = H]. Various I were superior to the known compound 3-acetyloxy-2-phenyl-1H-inden-1-one in tests against resistant Tetranychus urticae, Plutella maculipennis, and resistant Lucilia cuprina larvae, and some I showed superior herbicidal activity and crop selectivity.

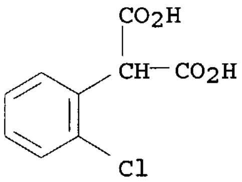
IT **144616-14-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of, as intermediate for pesticidal pyrazoline derivs.)

RN 144616-14-8 CAPLUS

CN Propanedioic acid, (2-chlorophenyl)- (9CI) (CA INDEX NAME)



L11 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:2755 CAPLUS

DOCUMENT NUMBER: 118:2755

TITLE: Purification and properties of a novel arylmalonate decarboxylase from Alcaligenes bronchisepticus KU 1201

AUTHOR(S): Miyamoto, Kenji; Ohta, Hiromichi

CORPORATE SOURCE: Fac. Sci. Technol., Keio Univ., Yokohama, 233, Japan

SOURCE: European Journal of Biochemistry (**1992**), 210(2), 475-81
CODEN: EJBCAI; ISSN: 0014-2956

DOCUMENT TYPE: Journal

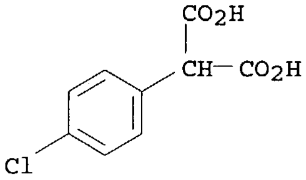
LANGUAGE: English

AB A novel decarboxylase which catalyzes an enantioselective decarboxylation of α-aryl-α-methylmalonates to α-arylpropionates has been purified from a Alcaligenes bronchisepticus KU 1201. The enzyme was purified 300-fold to homogeneity, judged from the anal. of N-terminal amino acid sequence, and it was found to be a monomeric enzyme of 24 kDa apparent mol. weight The enzyme catalyzes a decarboxylation giving α-arylalkanoates from substituted malonates such as α-arylmalonate and α-alkyl-α-arylmalonates. The decarboxylase is not a biotin containing enzyme because avidin has no influence on the enzyme activity. In addition, the enzyme does not require known cofactors (ATP, ADP and CoA) for maximum activity. The enzyme activity was inhibited by sulfhydryl agents. The electronic effect of substituents on kcat for the enzymic decarboxylation of arylmalonates has been studied. The logarithm of relative value of kcat gave a linear correlation to Hammett's s with a q value of +1.9 for substituted phenylmalonates. By comparing the relative activities, it is clear that the enzyme prefers α-arylmalonates to α-aryl-α-methylmalonates. Thus, the enzyme was tentatively named as arylmalonate decarboxylase.

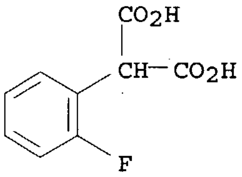
IT **118459-48-6P**, α-(p-Chlorophenyl)malonic acid
144616-11-5P, α-(o-Fluorophenyl)malonic acid
144616-12-6P, α-(m-Fluorophenyl)malonic acid
144616-13-7P, α-(p-Fluorophenyl)malonic acid
144616-14-8P, α-(o-Chlorophenyl)malonic acid
144616-15-9P, α-(m-Chlorophenyl)malonic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and reaction with arylmalonate decarboxylase of Alcaligenes bronchisepticus, structure in relation to)

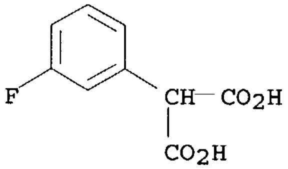
RN 118459-48-6 CAPLUS
CN Propanedioic acid, (4-chlorophenyl)- (9CI) (CA INDEX NAME)



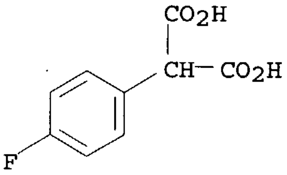
RN 144616-11-5 CAPLUS
CN Propanedioic acid, (2-fluorophenyl)- (9CI) (CA INDEX NAME)



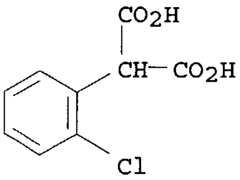
RN 144616-12-6 CAPLUS
CN Propanedioic acid, (3-fluorophenyl)- (9CI) (CA INDEX NAME)



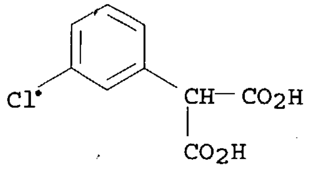
RN 144616-13-7 CAPLUS
CN Propanedioic acid, (4-fluorophenyl)- (9CI) (CA INDEX NAME)



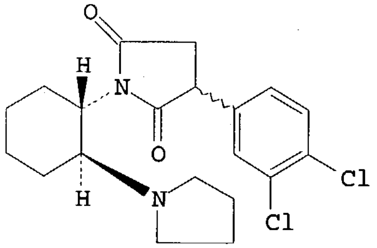
RN 144616-14-8 CAPLUS
CN Propanedioic acid, (2-chlorophenyl)- (9CI) (CA INDEX NAME)



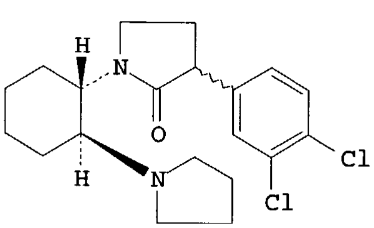
RN 144616-15-9 CAPLUS
CN Propanedioic acid, (3-chlorophenyl)- (9CI) (CA INDEX NAME)



L11 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:255429 CAPLUS
DOCUMENT NUMBER: 116:255429
TITLE: Synthesis and opioid receptor affinities of (1',2'-trans)-3-(3,4-dichlorophenyl)-1-[2'-(N-pyrrolidinyl)cyclohexyl]pyrrolidin-2,5-dione
AUTHOR(S): Cheng, Chen Yu; Lin, Yi Bin
CORPORATE SOURCE: Coll. Med., Natl. Taiwan Univ., Taipei, Taiwan
SOURCE: Zhonghua Yaoxue Zazhi (**1992**), 44(1), 45-50
CODEN: CYHCEX; ISSN: 1016-1015
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

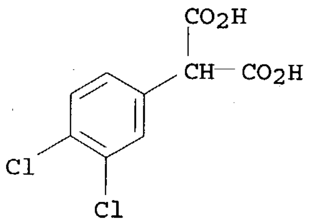


II

AB The title compds. I were prepared by condensation of 3,4-dichlorophenylsuccinic acid and trans-2-(N-pyrrolidinyl)cyclohexylamine. In an opioid receptor binding assay, a mixture of stereoisomers I were weak opioid ligands with low selectivity towards the μ receptor. As compared with previously prepared (Cheng, C. Y.; et. al., 1990) χ-selective compds. II, the reduction in χ-affinity and the loss of χ-selectivity in I may be due to the polar nature of the addnl. carbonyl group.

IT **141516-11-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclocondensation of, with (pyrrolidinyl)cyclohexylamine, pyrrolidinedione from)

RN 141516-11-2 CAPLUS
CN Propanedioic acid, (3,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



L11 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:590692 CAPLUS
DOCUMENT NUMBER: 111:190692

TITLE: Azido derivatives of dicarboxylic acids for photoaffinity labeling of mitochondrial carriers

AUTHOR(S): Szewczyk, Adam; Nalecz, Maciej J.; Wojtczak, Lech

CORPORATE SOURCE: Dep. Cell. Biochem., Nencki Inst. Exp. Biol., Warsaw, 02-093, Pol.

SOURCE: Journal of Biochemical and Biophysical Methods (**1989**), 18(2), 125-34
CODEN: JBBMDG; ISSN: 0165-022X

DOCUMENT TYPE: Journal

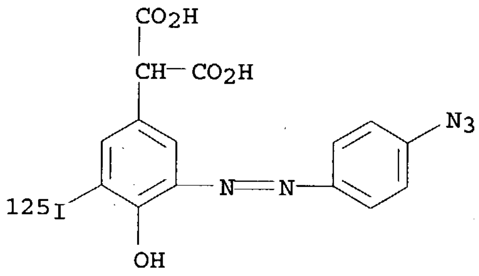
LANGUAGE: English

AB New photoaffinity probes, N-(4-azidosalicylic)-aminossuccinic acid, 3-(4-azidophenylazo)-4-hydroxyphenylmamonic acid, (4-azido-2-nitroanilino)-N-succinic acid, 4-azidophenacylthiosuccinic acid, and 4-azidophenylsuccinic acid, were synthesized and characterized chemical They differ in the distance between dicarboxylic and azido groups, hydrophobicity, and acidic moiety. These reagents can be applied for photoaffinity labeling of mitochondrial anion carriers and enzymes interacting with dicarboxylic acids. Inhibition and labeling of the dicarboxylate carrier is presented.

IT **123213-62-7P**
RL: PREP (Preparation)
(preparation of, for photoaffinity labeling of dicarboxylate carriers)

RN 123213-62-7 CAPLUS

CN Propanedioic acid, [3-[(4-azidophenyl)azo]-4-hydroxy-5-(iodo-125I)phenyl]- (9CI) (CA INDEX NAME)



L11 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:153847 CAPLUS

DOCUMENT NUMBER: 110:153847

TITLE: Effect of temperature on borane reduction of representative malonic acids

AUTHOR(S): Choi, Yong M.; Emblidge, Robert W.; Kucharczyk, Norbert; Sofia, R. Duane

CORPORATE SOURCE: Wallace Lab., Carter-Wallace, Inc., Cranbury, NJ, 08512, USA

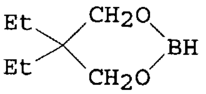
SOURCE: Journal of Organic Chemistry (**1989**), 54(5), 1194-8
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 110:153847

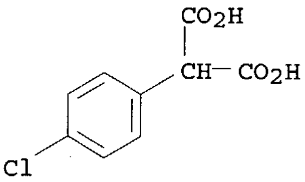
GI



V

AB The controlled reaction of phenylmalonic acid (I) with borane-THF at appropriate temperature makes available (phenylmalonyldioxy)borane [II, PhCH(CO2)2BH], which has been characterized. Reduction of II or of the corresponding acid I proceeds at 0° at the same rate. The reaction, however, is incomplete, showing only 33% product formed in 4 h. Diethylmalonic acid (III), which possesses no α-hydrogen, and the (diethylmalonyldioxy)borane (IV) are reduced at the same rate to the corresponding cyclic dialkoxyborane V. These results suggest that the reduction proceeds through intermediates II or IV. The rates of the borane reduction for a series of malonic acids have been systematically studied and compared at 0° and at -20°. The redns. of aromatic substituted malonic acids are quite sluggish with substantial (46-72%) α-metalation occurring at 0°. Aliphatic alkylmalonic acids are reduced in 24 h with 34-40% of α-metalation. At -20°, most malonic acids are completely reduced in times ranging from 24 h for aliphatic to 3 days for aromatic compds., with only 2-24% α-metalation. The reduction of I requires -30° for 6 days to avoid α-metalation. The reduction of III at either 0° or -20° is completed in 8 h. At an appropriate lower temperature the reduction successfully competes with the α-metalation.

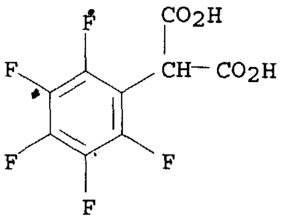
IT **118459-48-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(borane reduction of, in THF, temperature effect of)
RN 118459-48-6 CAPLUS
CN Propanedioic acid, (4-chlorophenyl)- (9CI) (CA INDEX NAME)



L11 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1970:413946 CAPLUS
DOCUMENT NUMBER: 73:13946
TITLE: Aromatic fluoro derivatives. XL. Effect of a pentafluorophenyl ring on the strength of CH-acids
AUTHOR(S): Vlasov, V. M.; Krivousova, E. D.; Yakobson, G. G.
CORPORATE SOURCE: Novosibirsk. Inst. Org. Khim., Novosibirsk, USSR
SOURCE: Zhurnal Organicheskoi Khimii (**1970**), 6(4), 758-67
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The action of NaH on C6F5CH2CN in MeOCH2CH2OMe (I) solution gives p-NCCH2C6F4CH(CN)C6F5 (II) which at -10° to 25° forms with the excess NaH colored carbanion p-NCCH2C6F4C-(Na+)(CN)C6F5 (III). The existence of III was established by ir and NMR spectroscopy. The hydrolysis of II gave the corresponding dicarboxylic acid. Similarly, C6F5CH(CO2Et)2 in I solution gave stable C6F5C-(Na+)(CO2Et)2 (IV). The comparison of IV NMR spectra in I and PO(NMe2)3 (highly polar solvent) with the spectra of RC-(Na+)(CO2Et)2 (V) [R is p-HC6F4, 2,4-(O2N)2C6H3, o-O2NC6H4, p-O2HC6H4, or Ph] shows that the ionization of IV is of the same order as that of V (R = o-O2NC6H4 or p-O2NC6H4). The position of equilibrium was established in RCH(CO2Et)2 + IV .dblharw. V + C6F5CH(CO2Et)2 systems. The relative reactivity of IV and V toward N-chloromethylphthalimide was determined

IT **28744-69-6**
RL: PRP (Properties)
(nuclear magnetic resonance of)
RN 28744-69-6 CAPLUS
CN Malonic acid, (pentafluorophenyl)- (8CI) (CA INDEX NAME)



L11 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1963:461935 CAPLUS
DOCUMENT NUMBER: 59:61935
ORIGINAL REFERENCE NO.: 59:11350c-d
TITLE: Oxyacids of bisphenol type
INVENTOR(S): Uetani, Iwao; Hasegawa, Kenji; Nagao, Sohichi
PATENT ASSIGNEE(S): Daiwa Chem. Ind. Co.
SOURCE: 3 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38002266		19630318	JP	19590725 <--

AB To a boiling solution of 40 g. Na 2,2'-thiobis(4,6-dichlorophenol) in 300 cc. EtOH is added 27.0 g. ClCH2CO2Et, the mixture refluxed 3-6 hrs., cooled, filtered, 20 g. 50% NaOH solution added to the filtrate, the mixture boiled 30 min., evaporated, 500 cc. H2O added to the residue, and the mixture acidified with HCl to give 43.7 g. 2,2'-thiobis(4,6-dichlorophenoxyacetic acid). Similarly prepared are: 2,2'-methylenebis(3,4,6-trichlorophenoxypropionic acid), 2,2'-thiobis(4,6-dichlorophenoxymalonic acid), 2,2'-dithiobis(4,6-dichlorophenoxy-β-oxobutyric acid), 2,2'-benzylidenebis(6-chlorophenoxymalonic acid), 4,4'-ethylidenebis(2,6-dichlorophenoxyacetic acid), and 4,4'-vinylidenebis(2,6-dichlorophenoxycaproic acid), useful as anthelmintics.

IT **101474-96-8**, Malonic acid, [benzylidenebis[(6-chloro-o-phenylene)oxy]]di-
(preparation of)

RN 101474-96-8 CAPLUS

CN Malonic acid, [benzylidenebis[(6-chloro-o-phenylene)oxy]]di- (7CI) (CA INDEX NAME)